

CLAIMS

1. A method for executing a code, comprising:
 - receiving a trigger instruction;
 - selecting an entry in a trigger table, the entry associated with the trigger instruction; and
 - executing an auxiliary code referenced by the entry in the trigger table.
2. The method of claim 1, further comprising:
 - spawning a new thread, the new thread executing instructions included in the auxiliary code.
3. The method of claim 2, further comprising:
 - executing the new thread concurrently with a parent thread, the parent thread including the trigger instruction.
4. A method for executing a code, comprising:
 - receiving a trigger instruction;
 - selecting an entry in a trigger table, the entry associated with the trigger instruction; and
 - executing a p-slice code referenced by the entry in the trigger table.
5. The method of claim 4, further comprising:
 - spawning a new thread, the new thread executing instructions included in the p-slice code.
6. The method of claim 5, further comprising:
 - executing the new thread concurrently with a parent thread, the parent thread including the trigger instruction.
7. The method of claim 6, further comprising:
 - storing state information from the parent thread before spawning the new thread.

8. The method of claim 7, further comprising:
copying the state information for use in the new thread.
9. The method of claim 6, further comprising:
storing a register value of the parent thread before spawning the new thread.
10. The method of claim 9, further comprising:
copying the register value of the parent thread for use in the new thread.
11. The method of claim 4, wherein
the entry in the trigger table is selected by associative lookup of the trigger instruction.
12. The method of claim 4, further comprising:
reading an instruction pointer for the p-slice code from the entry in the trigger table.
13. An article of manufacture comprising a computer-readable medium having stored thereon instructions adapted to be executed by a processor, the instructions which, when executed, define a series of steps to be used to control a method for executing a code, said steps comprising:
receiving a trigger instruction;
selecting an entry in a trigger table, the entry associated with the trigger instruction; and
executing an auxiliary code referenced by the entry in the trigger table.
14. The article of manufacture of claim 13, wherein the series of steps further comprises:
spawning a new thread, the new thread executing instructions included in the auxiliary code;

15. A system, comprising:
- a current thread;
 - a function body configured to be executed as part of the current thread, the function body comprising at least one trigger instruction;
 - an auxiliary code; and
 - a trigger table, the trigger table comprising an entry, the entry associated with the trigger instruction and including a reference to the auxiliary code, the trigger table configured to allow the lookup of the entry when the trigger instruction is processed.
16. The system of claim 15, wherein
- the auxiliary code is configured to spawn a new thread when auxiliary code is executed.
17. The system of 16, wherein
- the auxiliary code is configured to store the value of a register associated with the current thread, when the auxiliary code is executed.
18. A system, comprising:
- a current thread;
 - a function body configured to be executed as part of the current thread, the function body comprising at least one trigger instruction;
 - a p-slice code; and
 - a trigger table, the trigger table comprising an entry, the entry associated with the trigger instruction and including a reference to the p-slice code, the trigger table configured to allow the lookup of the entry when the trigger instruction is processed.
19. The system of claim 18, wherein
- the p-slice code is configured to spawn a new thread when the p-slice code is executed.
20. The system of claim 18, wherein

the p-slice code is configured to store the value of at least one register associated with the current thread, when the p-slice code is executed.

21. The system of claim 18, wherein
the trigger table is an associative lookup table.
22. A method for compiling, comprising:
 - receiving a function body, the function body comprising a trigger instruction;
 - outputting an auxiliary code associated with the function body and the trigger instruction; and
 - creating an entry in a trigger table, the entry associated with the trigger instruction and the auxiliary code.
23. The method for compiling of claim 22, further comprising:
 - creating a stub block, the stub block comprising a spawn instruction, the spawn instruction configured to spawn a new thread, the new thread configured to execute the auxiliary code.
24. A method for compiling, comprising:
 - receiving a function body, the function body comprising a trigger instruction;
 - outputting a p-slice code associated with the function body and the trigger instruction; and
 - creating an entry in a trigger table, the entry associated with the trigger instruction and the p-slice code.
25. The method of claim 24, further comprising:
 - receiving the p-slice code associated with the function body and the trigger instruction.
26. The method of claim 24, further comprising:
 - generating the p-slice code associated with the function body and the trigger instruction.

27. The method of claim 24, further comprising:
creating a stub block, the stub block comprising a spawn instruction, the spawn instruction configured to spawn a new thread, the new thread configured to execute the p-slice code.
28. The method of claim 27, further comprising:
adding store instructions to the stub block, the store instructions configured to store state information of a current thread, the state information of the current thread including values contained in live-in registers of the new thread
29. An article of manufacture comprising a computer-readable medium having stored thereon instructions adapted to be executed by a processor, the instructions which, when executed, define a series of steps to be used to control a method for compiling, said steps comprising:
receiving a function body, the function body comprising a trigger instruction;
outputting an auxiliary code associated with the function body and the trigger instruction; and
creating an entry in a trigger table, the entry associated with the trigger instruction and the auxiliary code.
30. The article of manufacture of claim 29, wherein
the auxiliary code is a p-slice code.